

REMARKS

Claims 1-8 are currently pending in this application, as amended. Claim 1 has been amended to more particularly point out and distinctly claim the invention. Support for the amendment to claim 1 can be found in, among other places, the original claim; in the original Specification at paragraphs [0017], [0019] and [0028]; and Figs. 1A-1B and 4. Accordingly, no new matter has been added.

Rejections Under 35 U.S.C. § 102(b)

Claims 1-6 have been rejected under 35 U.S.C. § 102(b) as being anticipated by “A compact, Self-Powered Push Button Controller” (“Paradiso” hereinafter “Paradiso”).

Withdrawal of the rejection of claims 1-6 is respectfully requested in view of the foregoing amendment to claim 1 and for at least the following reasons.

Claim 1

Claim 1, as amended, recites, *inter alia*:

a circuit ground reference electrically coupled to the storage capacitor; and
a voltage controlled switch having a predetermined voltage trip point, the voltage controlled switch electrically coupling the transmitter circuit to one of the storage capacitor and the circuit ground reference when an amount of charge stored in the storage capacitor causes voltage on the storage capacitor to be greater than or equal to the predetermined voltage trip point thereby permitting the storage capacitor to discharge through the transmitter circuit, the voltage applied to the transmitter circuit from the storage capacitor decaying as the storage capacitor discharges. [underline emphasis added]

Paradiso does not disclose or suggest an amusement device identification transmission system having a voltage control switch with a predetermined voltage trip point and that the voltage controlled switch electrically couples the transmitter circuit to one of the storage capacitor and the circuit ground reference when an amount of charge stored in the storage capacitor causes voltage on the storage capacitor to be greater than or equal to the predetermined

voltage trip point thereby permitting the storage capacitor to discharge through the transmitter circuit and that the *voltage applied to the transmitter circuit from the storage capacitor decays as the storage capacitor discharges.*

Paradiso discloses a piezo element coupled to a matching transformer and a diode to charge a tank capacitor. The tank capacitor supplies input voltage to a linear low-dropout (LDO) regulator integrated circuit (IC). The linear LDO regulator IC provides a *regulated voltage* to an input of a digital identification encoder IC having an output coupled to a radio frequency (RF) transmitter. The particular linear LDO regulator IC depicted in Fig. 1 of Paradiso (i.e., a Maxim MAX666, technical datasheet attached hereto) has a “drop out voltage” which determines the lowest useable input voltage for which the device will *provide a regulated output voltage* (i.e., an approximately constant or stable output voltage such as a constant 5 Volts or a constant 3 Volts). See for example page 7 of the attached technical data sheet for the Maxim Dual Mode™ 5V/Programmable Micropower Voltage Regulator under the “Application Hints Section.” When the input voltage is below a certain threshold, the linear LDO regulator IC is not capable of providing a regulated output voltage and drops the output of the linear LDO regulator IC. Therefore, the linear LDO regulator IC includes a plurality of functions and a plurality of inputs so that the device only provides a regulated output voltage when there is sufficient input voltage in excess of the desired regulated output voltage by a certain amount (i.e., the drop out voltage) (e.g., need 6 Volts at the input to achieve a regulated 5 Volts at the output).

In contradistinction, the present invention, as set forth in amended claim 1, is a simple voltage control switch 16 which couples a transmitter circuit 12 either to a ground reference or to a storage capacitor C9. As depicted in Figs. 1A-1B, the storage capacitor C9 is electrically coupled directly to the transmitter circuit 12 (i.e., V_c) and the voltage control switch 16 electrically couples the low or return side of the transmitter circuit 12 to the circuit ground reference (i.e., V_s). Accordingly, the claimed amusement device identification transmission system set forth in amended claim 1 has a simplified voltage controlled switch 16, as compared to a voltage regulator IC, that electrically couples the transmitter circuit 12 to one of the storage capacitor C9 and the circuit ground reference to thereby permit the storage capacitor C9 to discharge through the transmitter circuit 12 *without voltage-regulating voltage* from the storage capacitor C9 because the *voltage applied to the transmitter circuit 12 from the storage capacitor*

C9 decays as the storage capacitor C9 discharges. Fig. 4 shows the charge building up on the capacitor C9 before the capacitor C9 discharges through the transmitter 12 resulting in a decaying or diminishing (trailing off) of the voltage applied to the transmitter circuit 12 as the capacitor C9 discharges. The voltage controlled switch 16, of the present invention, simply switches V_C or V_S to the transmitter circuit 12 *without* a more complicated voltage-regulating circuit that must have a supply voltage greater than a desired voltage output.

A claim is anticipated under 35 U.S.C. § 102 only if each and every element as set forth in the claim is found expressly or inherently described in a single prior art reference and the elements must be arranged as required in the claim. M.P.E.P. § 2131. Paradiso does not disclose an amusement device identification transmission system having a voltage control switch with a predetermined voltage trip point and that the voltage controlled switch electrically couples the transmitter circuit to one of the storage capacitor and the circuit ground reference when an amount of charge stored in the storage capacitor causes voltage on the storage capacitor to be greater than or equal to the predetermined voltage trip point thereby permitting the storage capacitor to discharge through the transmitter circuit and that the *voltage applied to the transmitter circuit from the storage capacitor decays as the storage capacitor discharges.*

Therefore, Paradiso fails to disclose or suggest each and every element of claim 1, as amended. Dependent claims 2-6 depend from independent claim 1. It is therefore, respectfully submitted, that independent claim 1 and dependent claims 2-6 are not anticipated by Paradiso. Accordingly, it is respectfully requested that the rejection of independent claim 1 and dependent claims 2-6 under 35 U.S.C. § 102(b) be withdrawn.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 7-8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Paradiso in view of U.S. Patent No. 5,065,067 ("Todd et al.," hereinafter, "Todd").

Withdrawal of the rejections of claims 7-8 is respectfully requested in view of the foregoing amendments and for at least the following reasons.

Claims 7-8

Claims 7-8 are dependent upon amended independent claim 1.

For all the reasons cited above with respect to claim 1, Paradiso fails to disclose or suggest an amusement device identification transmission system having a voltage control switch with a predetermined voltage trip point and that the voltage controlled switch electrically couples the transmitter circuit to one of the storage capacitor and the circuit ground reference when an amount of charge stored in the storage capacitor causes voltage on the storage capacitor to be greater than or equal to the predetermined voltage trip point thereby permitting the storage capacitor to discharge through the transmitter circuit and that the *voltage applied to the transmitter circuit from the storage capacitor decays as the storage capacitor discharges*.

Todd fails to compensate for the deficiencies of Paradiso. Todd merely discloses a simplified piezo-electric powered circuit for testing lights or illuminating lamps and toys. In particular, the Examiner points to a briefly described embodiment shown in Figs. 4-5 which indicates that a piezo-electric circuit can be used with a toy such that a striker mounted within the wheels or tracks of the toy strikes the piezo-electric device as a child pushes the toy. However, none of the circuits disclosed by Todd include a voltage control switch (i.e., Figs. 1, 1A, 2, 3 and 7).

To establish *prima facie* obviousness of a claimed invention, all the claim's limitations must be taught or suggested by the prior art. M.P.E.P. § 2143.03.

Paradiso and Paradiso modified by Todd fail to disclose or suggest all the claim limitations of claims 7-8. Even modifying Paradiso to include the toy with wheel/track striker of Todd fails to disclose the voltage controlled switch set forth in claims 7-8. Accordingly, applicants respectfully submit that claims 7-8 are not obvious under 35 U.S.C. § 103(a) in view of Paradiso and Paradiso modified by Todd. Applicants respectfully request that the rejection of claims 7-8 under 35 U.S.C. § 103(a) be withdrawn.

CONCLUSION

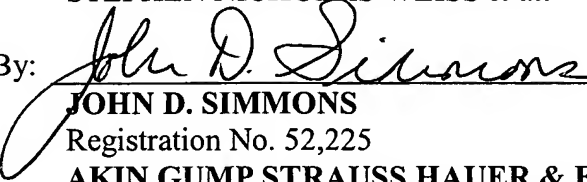
In view of the foregoing Amendment and Remarks, it is respectfully submitted that the present application, including claims 1-8, is in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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Attachment - 8 page Technical Data Sheet – “Maxim Dual Mode™ 5V/Programmable
Micropower Voltage Regulators,” 19-0921, Rev. 1, 7/96.